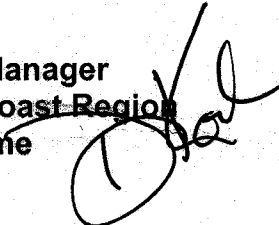


## Memorandum

To: Mr. James Pedri  
California Regional Water Quality  
Control Board Central Valley Region  
415 Knollcrest Drive, Suite 100  
Redding, CA 96002

Date: March 26, 2004

From: **Donald B. Koch, Regional Manager**  
**Northern California-North Coast Region**  
**Department of Fish and Game**  
601 Locust Street  
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Subject: Amendments to the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan) for Beneficial Uses at West Squaw Creek, Shasta County, Staff Report and Functional Equivalent Document, Draft Report, April 2004 (Staff Report), and Use Attainability Analysis, Draft Report, February 2004 (UAA)

The Department of Fish and Game (DFG) has reviewed the subject agency draft Staff Report and UAA and has the following general and specific comments to relay to your agency. Editorial typos were faxed to your staff on March 22, 2004.

We appreciate the aggressive and innovative remedial actions which have taken place in the West Squaw Creek watershed. The UAA contains a good description of activities which have been completed to mitigate past and continuing water quality problems associated with the abandoned mines in the area. We understand that as remedial efforts are implemented to address the major discharges of metals to the watercourses, costs increase exponentially to address the remaining, generally small and more complex sources.

The DFG concurs with the proposal to amend the Basin Plan to remove the beneficial uses of "WARM, COLD, and SPWN (spawning)" for the section of West Squaw Creek from the Early Bird tributary to the confluence with Shasta Lake. Our concurrence is based on the following general stipulations as discussed in the Staff Report and UAA.

- Mining Remedial Recovery Company, Inc (MRRC), will remain responsible for monitoring and maintaining the existing remedial facilities, complying with National Pollutant Discharge Elimination System (NPDES) permits to protect remaining designated beneficial uses in West Squaw Creek and the uses of downstream water bodies and continue to implement point and nonpoint source "Best Management Practices" (BMPs).
- MRRC will focus its resources on reducing metal loading from larger more significant sources of metal discharges to Little Backbone Creek and Spring Creek which will allow for greater overall reduction in metal loading to Shasta Lake and the Sacramento River.

- The Keystone bulkhead seal has created a blowout upslope. The UAA states this discharge as well as discharges from the Upper Windy Camp anoxic limestone drain is scheduled to be routed through a treatment unit. Table 4 in the UAA indicates these discharges will be treated in 2004.
- Monitoring will be sufficient to assure there is no backsliding from current conditions in the receiving water as well as downstream in Shasta Lake.

The report acknowledges that currently and in the future there are long-term integrity problems with bulkhead seals and leakage from the mine cavity via fractures, fissures and blowouts. The DFG recommends that MRRC prepare a contingency plan for reasonable foreseeable failures in the containment of the acid rock drainage (ARD) in the body of the mines. Monitoring must be sufficient to determine locations of future seeps, leakage and blowouts. It is unclear in the document if the baseline/existing water quality includes metal loading from the Keystone blowout. The baseline conditions should be carefully documented to insure compliance with the Federal Antidegradation policy and State Water Resource Control Board Board policies and resolutions which regulate discharge of pollutants and maintain high quality of water in California.

Following are our specific concerns, comments and suggestions for the draft documents.

**5.1 Antidegradation**, Page 35, first paragraph states: "It is not feasible to reduce discharges of metals to concentrations sufficient to support WARM, COLD, or SPWN because even if all point source discharges were controlled, naturally occurring nonpoint source discharges would continue to cause the water to exceed protective concentrations." Please add, "man-made nonpoint sources" to the above language. We believe, as stated on page 48 of the staff report, "The effects of mining-induced contamination and natural water quality on aquatic life in West Squaw Creek, may be inseparable." We recommend eliminating speculation on natural vs. mining components and focus on controllable factors. This comment also applies to the summary statement for the first paragraph on page 49.

**6.1.1 Discharger Monitoring**, Page 40, the staff report states surface waters upstream and downstream of the abandoned mines are sampled quarterly and analyzed for copper, zinc, cadmium, pH, priority pollutant metals and flow. A monitoring station in West Squaw Creek immediately upstream of Shasta Lake has been established to provide data on the long term effectiveness of remedial activities and to assure the current water quality is maintained or improved. The DFG recommends that monitoring immediately upstream of Shasta Lake be done at more frequent intervals. Access to this station is not difficult and can be achieved during storm events and throughout the winter high flow periods when metal loading to Shasta Lake can be significant. DFG staff is available to work with the Central

Valley Regional Board staff to determine reasonable monitoring requirements at the mouth of West Squaw Creek. Please provide DFG staff with a copy of the monitoring program described in the referenced report titled *MRRC, Shasta Area Mines, Site-wide Water Monitoring Network Work Plan, Shasta County California*, (MRRC, June 2002).

**7.2 Proposed Project.** We recommend adding a section on the purpose and need for the proposed revision to the beneficial use designation. The UAA has an excellent description in Section 1.1.3 found on pages 3 and 4.

**7.6.17 Water Quality**, page 66. The staff report states "The proposed Basin Plan amendments would have **no impact** to baseline/existing water quality and beneficial uses. As additional remedial technologies are developed, future actions may be taken to improve water quality conditions. *Pont (sic)* source discharges in the watershed will continue to be regulated by NPDES permits that require protection of remaining beneficial *sues (sic)* of West Squaw Creek and downstream water bodies."

As stated earlier, baseline/existing conditions are not clearly defined in the document. This is an important definition as it relates to antidegradation, antibacksliding and downstream impacts to Shasta Lake and the Sacramento River. Point and uses are misspelled in the last sentence of the quoted section. We also recommend you add that the nonpoint sources will also be regulated by NPDES permits, as stated in other areas of the staff report.

**7.7 Cumulative Impact Analysis for the Proposed Project**, page 67. The second paragraph discusses additional changes to beneficial uses for other mine areas of the West Shasta Mining District. It further states "There is no anticipated circumstance where impacts of ARD could cumulate and impact resources in the West Shasta Mining District **worse than current conditions**, (emphasis added) as all proposed amendments would be protective of existing beneficial uses. There are no circumstances that can reasonably be forecast for the unique combination of environmental conditions in the affected area under which the combination of metals would collectively cause a significant adverse cumulative impact to West Squaw Creek aquatic life or any other environmental resource."

We suggest that there be disclosure that the downstream environmental resources of Shasta Lake and the Sacramento River are already being cumulatively impacted by metals discharges from the abandoned mines in the West Shasta Mining District. There should be disclosure that the Sacramento River and parts of Shasta Lake are currently listed as impaired water bodies under the Clean Water Act Section 303(d) list and have or are scheduled for total maximum daily load (TMDL) allocations for metals.

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The DFG appreciates the opportunity to comment on the draft Staff Report and UAA. We would like to continue to work with the Central Valley Regional Board staff on the above concerns and development of the proposed Basin Plan amendment for West Squaw Creek. If you have any questions or concerns regarding this matter, please contact Environmental Scientist Jane Vorpapel at (530) 225-2124.

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